



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/893,559	06/29/2001	Jong Sang Baek	8733.448.00	5057

30827 7590 02/24/2004

MCKENNA LONG & ALDRIDGE LLP  
1900 K STREET, NW  
WASHINGTON, DC 20006

EXAMINER
----------

BELL, PAUL A

ART UNIT	PAPER NUMBER
----------	--------------

2675

11

DATE MAILED: 02/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/893,559

Applicant(s)

BAEK ET AL.

Examiner

PAUL A BELL

Art Unit

2675

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12/02/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>8</u> . | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 2675

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-11 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. With regard to claims 1 and 7 the phrase, "**counting a number** of contiguous non--alternating states ", is not directly supported in the specification. Therefore if you disagree please provide an illustration by matching the specific words in the spec and drawings that read on these claim words so as to make more clear just one of the many possible interpretations of these words.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 12-18 and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by KIM (GB 2355840 A Date of publication 2 May 2001).

With regard to claim 12 Kim teaches a method of driving a display (abstract) comprising: receiving an input signal having a first period corresponding to a number of lines in the display (figure 2, item 10); determining whether the first period is less than a first reference period (figure 3, item S2 it is inherent when you determine if the frequency is in a range it must necessarily involve determining whether the input period is less than a first reference period and/or greater than a second reference period); and outputting a signal of a first state if the first period is less than the first reference period (figure 3, item s4 ).

With regard to claim 13 Kim teaches the method according to claim 13, wherein the receiving, determining and outputting steps are repeated and determining if the first state is output a second time (figure 3).

With regard to claim 14 Kim teaches a method of driving a display (abstract) comprising:  
receiving an input signal having a first period corresponding to a number of lines in the display (figure 2, item 10); determining whether the first period is greater than a first reference period (figure 3, item S2 it is inherent when you determine if the frequency is in a range it must necessarily involve determining whether the input period is less than a first reference period and/or greater than a second reference period); and outputting a signal of a first state if the first period is greater than the first reference period (figure 3, item s4 ).

With regard to claim 15 Kim teaches the method according to claim 14, wherein the receiving, determining and outputting steps are repeated and determining if the first state is output a second time (figure 3).

With regard to claim 16 Kim teaches a method of driving a display (abstract) comprising: receiving an input signal having a first period corresponding to a number of lines in the display (figure 2, item 10); determining whether the first period is less than a first reference period and greater than a second reference period (figure 3, item S2 it is inherent when you determine if the frequency is in a range it must necessarily involve determining whether the input period is less than a first reference period and/or greater than a second reference period); and outputting a signal of a first state if the first period is less than the first reference period and greater than the second reference period (figure 3, item s4 ).

With regard to claim 17 Kim teaches a method according to claim 16, wherein the receiving, determining and outputting steps are repeated and determining if the first state is output a second time (figure 3).

With regard to claim 18 Kim teaches a method of driving in a display (figure 2): receiving a vertical synchronization signal (figure 2, item 10); generating an intermediate signal from the vertical synchronization signal (figure 2, item 10 and 20), the intermediate signal indicating whether the vertical synchronization signal has an error; and outputting a desired video signal to the display when the error is detected (figure 3, item S2).

With regard to claim 24 Kim teaches a method of driving in a display (figure 2): receiving a data enable signal; generating an intermediate signal from the data enable signal (figure 2, item 40), the intermediate signal indicating whether the data enable signal has an error; and outputting a desired video signal to the display when the error is detected (figure 3, item S2).

1. Claims 12-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Akira (JP 9270936 A 14 October 1997).

With regard to claim 12 Akira teaches a method of driving a display (abstract) comprising: receiving an input signal having a first period corresponding to a number of lines in the display (abstract "horizontal synchronization signal"); determining whether the first period is less than a first reference period (abstract); and outputting a signal of a first state if the first period is less than the first reference period (SEE figure 1, item 5 "switching circuit" and item 7 "switching controller" whereby if item 2 "synchronization detector" detects if oscillator signal frequency equals horizontal synchronizing signal causes switch item 5 to go one way and if not equal (which reads on less than or greater than) the switch goes the other way).

With regard to claim 13 Akira teaches the method according to claim 13, wherein the receiving, determining and outputting steps are repeated and determining if the first state is output a second time (abstract).

With regard to claim 14 Akira teaches a method of driving a display (abstract) comprising: receiving an input signal having a first period corresponding to a number of lines in the display (abstract "horizontal synchronization signal"); determining whether

the first period is greater than a first reference period (abstract); and outputting a signal of a first state if the first period is greater than the first reference period (SEE figure 1, item 5 "switching circuit" and item 7 "switching controller" whereby if item 2 "synchronization detector" detects if oscillator signal frequency equals horizontal synchronizing signal causes switch item 5 to go one way and if not equal (which reads on less than or greater than) the switch goes the other way).

With regard to claim 15 Akira teaches the method according to claim 14, wherein the receiving, determining and outputting steps are repeated and determining if the first state is output a second time (abstract).

With regard to claim 16 Akira teaches a method of driving a display (abstract) comprising: receiving an input signal having a first period corresponding to a number of lines in the display (abstract "horizontal synchronization signal"); determining whether the first period is less than a first reference period and greater than a second reference period (abstract); and outputting a signal of a first state if the first period is less than the first reference period and greater than the second reference period (SEE figure 1, item 5 "switching circuit" and item 7 "switching controller" whereby if item 2 "synchronization detector" detects if oscillator signal frequency equals horizontal synchronizing signal causes switch item 5 to go one way and if not equal (which reads on less than or greater than) the switch goes the other way).

With regard to claim 17 Akira teaches a method according to claim 16, wherein the receiving, determining and outputting steps are repeated and determining if the first state is output a second time (abstract).

5. Claims 30 and 33 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamaguchi (6,329,975).

With regard to claim 30 Yamaguchi teaches a liquid crystal display device including; a timing controller (figure 3) provided with a signal presence determiner for detecting an application of an input signal from an interface (figure 3, item 11), wherein said signal presence determiner comprising: an oscillator for generating a reference clock having the same frequency as a horizontal synchronizing signal and a pre-synchronizing signal having the same frequency as a vertical synchronizing signal (figure 3, item 6); a period detector for comparing a data enable signal from the exterior thereof with the reference clock to output a period of the input signal with the aid of a detection reference signal and the pre-synchronizing signal (figure 3, item 11); *a period comparator for comparing a period range between a desired maximum value and a desired minimum value of the input signal* ( SEE column 4, lines 45 –55; “if the data enable signal indicating the effective display data **period is not detected** for more than a constant period , a select signal is generated. For example , if the data enable signal indicating an effective display data period is not detected for a **specific length** of time **or longer**” note this reads on minimum to maximum ); and signal presence/absence comparing means for determining a presence/absence of the input signal in response to a pulse number of the input signal detected within a period range between the maximum value and the minimum value during an application interval of the detection reference signal (figure 3, items 8 and 9).



With regard to claim 33 Yamaguchi teaches a method of driving a liquid crystal display device including; a timing controller (figure 3) provided with a signal presence determiner for detecting an application of an input signal from an interface (figure 3, item 11), said method comprising the steps of: generating a reference clock having the same frequency as a horizontal synchronizing signal (figure 3, Dot Clock) and a pre-synchronizing signal having the same frequency as a vertical synchronizing signal (figure 3, item Vsp1); comparing a data enable signal from the exterior with the reference clock to output a period of the input signal with the aid of a detection reference signal and the pre-synchronizing signal (figure 3, items 11 and 9); *comparing a period range between a desired maximum value and a desired minimum value of the input signal*( SEE column 4, lines 45 –55; “if the data enable signal indicating the effective display data **period is not detected** for more than a constant period , a select signal is generated. For example , if the data enable signal indicating an effective display data period is not detected for a **specific length** of time or longer” note this reads on minimum to maximum ); and determining a presence/absence of the input signal in response to a pulse number of the input signal detected within a period range between the maximum value and the minimum value during an application interval of the detection reference signal (figure 3, items 8 and 9).

***Response to Arguments***

6. Applicant's arguments filed 12/02/2003 have been fully considered but they are not persuasive.

With regard to 112, first Paragraph rejection of claims 1-11 the applicant sufficiently defines the phrases “intermediate signal”, “contiguous alternating states”

and "contiguous non-alternating states" but still does not sufficiently argue or show support for , "**counting a number** of contiguous **non--**alternating states ", in pages 2 and 3 or his response. It is not clear when there is no frequency difference what are you counting. You need to clearly show support for "counting a number".

The applicant argues on page 4 with regard to the rejection of claims 12-18 and 24 under 102(e) as anticipated by KIM (GB 2355840 A Date of publication 2 May 2001) that "Kim is not available as prior art", because his application was filed 29 June 2001 with a claim to foreign priority to a patent application in Korean language dated 15 December 2000

The examiner disagrees because applicant cannot rely upon the foreign priority papers to overcome this rejection because an official certified English translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

The applicant argues on page 4 with regard to claim 12 that Akira does not teach "outputting a signal of a first state if the first period is **less than** the first reference period". The examiner disagrees and references the more detailed rejection above.

The applicant argues on page 4 with regard to claim 14 that Akira does not teach "outputting a signal of a first state if the first period is **greater than** the first reference period". The examiner disagrees and references the more detailed rejection above.

The applicant argues on page 4 with regard to claim 16 that Akira does not teach "outputting a signal of a first state if the first period is **less than** the first reference

period and **greater than** the first reference period". The examiner disagrees and references the more detailed rejection above.

The applicant argues on page 5 with regard to claim 30 that Yamaguchi does not teach, "*a period comparator for comparing a period range between a desired maximum value and a desired minimum value of the input signal*". The examiner disagrees and references the more detailed rejection above.

The applicant argues on page 5 with regard to claim 33 that Yamaguchi does not teach, "*comparing a period range between a desired maximum value and a desired minimum value of the input signal*". The examiner disagrees and references the more detailed rejection above.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 19-23, 25-29, 31, 32, 34, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over KIM (GB 2355840 A Date of publication 2 May 2001).

With regard to claims 19-23 and 25-29 KIM does not directly illustrate all the "obvious uses" for his video signal such as the video signal being all black, color, based on a previous image, a message or changes with time. However such recitations of what the content of the video data is merely directed towards an "OBVIOUS INTENDED

USE" of the video signal whereby such recitations encompass all the standard well known functions of video data.

With regard to claims 31, 32, 34 and 35 Kim does not directly illustrate the value for "period range" or "pulse number" being controlled by "a user". However "the user" can be viewed broadly as the first user the one who programmed the device and it would be obvious that the programmer of KIM had some level of control for selecting these values.

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Bell whose telephone number is (703) 306-3019.


If attempts to reach the examiner by telephone are unsuccessful the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377 can help with any inquiry of a general nature or relating to the status of this application.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

Or Faxed to: (703) 872-9306

Or Hand-delivered to: Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor  
(Receptionist)

  
Paul Bell  
Art unit 2675  
February 23, 2004

  
CHANH NGUYEN  
PRIMARY EXAMINER